

**WC Docket No. 11-59**

**Comments on the FCC Notice of Inquiry Regarding  
Access to Public and Private Rights-of-Way**

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## **Executive Summary**

The Piedmont Environmental Council has extensive comments. They add up to the need for the FCC to:

- Use the statutory term “personal wireless service facilities.”
- Not use the meaningless term “wireless facilities.”
- Not create two classes of broadband: personal wireless service facilities and non-personal wireless service facilities.
- Explain how existing wireless users of the right-of-way will be allowed to “upgrade” their equipment with any degree of control by local government.
- Explain how the National Environmental Policy Act (NEPA) regulations will apply to proposals in the right-of-way.
- Explain how right-of-way permits, which are ministerially granted, can be substituted for zoning decisions, which are discretionary acts.
- Explain how right-of-way deployment immediately adjacent to residences can be measured, reviewed and monitored for radio frequency (RF) emissions.
- Explain how wind, ice and snow loading on utility poles will be evaluated by right-of-way decision-makers unfamiliar with ANSI standard EIA/TIA 222-G.
- Explain how “substantial evidence in a written record” will be used in applications for Broadband in the right-of-way.
- Explain to homeowners and tenants, living next to locations proposed for installation of “wireless facilities” in the right-of-way, how they can become involved in the ministerial process of granting permission.

There is a Telecommunications Act of 1996 and a Conference Committee report by the U.S. Congress on that law. These documents preserve local zoning authority over personal wireless service facilities with certain limitations. The FCC needs to review the Committee report and the law and refrain from curtailing local zoning authority over personal wireless service facilities.

## **1. Introduction**

These comments are from the Piedmont Environmental Council (PEC), a non-profit citizen's group active in nine counties of North Central Virginia. PEC's mission is to preserve the natural, scenic and historic values of this vital region of the U.S.

The PEC region is the Northern Piedmont, as shown in Figure 1. The region's key attributes are open spaces, natural viewshed, historic features, agricultural activity and clean air and water. Protecting these attributes, while recognizing the importance of economic vitality, has always been, and remains PEC's core organizational goal. Figure 1 shows the PEC Region and the extent to which our lands are protected.

Rights-of-way criss-cross the Northern Piedmont, providing the primary means of seeing and accessing our urban, suburban and undeveloped landscape.

PEC serves our cities, towns and county government. PEC provides counsel and information on issues that affect the region's health and vitality. Our tourists view the scenic grandeur from rights-of-way, including the famous Skyline Drive. Our mountains are channeled by energy rights-of-way. Our population is rapidly urbanizing and many residents live within a stone's throw of a public right-of-way. PEC is vitally concerned about the unfettered proliferation of wireless infrastructure in our rights-of-way, and we offer these comments for FCC's consideration.

## **2. Definitions**

In this section, PEC recognizes that the FCC wants to open up the nation's rights-of-way. But how can we start a national conversation about that unless we agree on terms? Will there be FCC rules and regulations? If so, will the terminology used be understood by all? Will the terminology be consistent with the law of the land? Or, can the FCC invent terminology at will? PEC begins by asking: just what is it that is going to be allowed in the right-of-way?

In promulgating its Notice (WC Docket No. 11-59), the FCC has employed terminology which PEC finds misleading and confusing. PEC seeks to clarify our understanding and intent of the Notice.



**a. Broadband**

The notice uses the term “broadband” interchangeably with “advanced telecommunications capability” as noted in Footnote 1, page 1 of the Notice of Inquiry Regarding Access to Public and Private Rights-of-Way. The reader of these comments is referred to both the Telecommunications Act of 1996 and the Broadband Data Improvement Act, now codified in Title 47, Chapter 12 of the United States Code.

In Section 1302(d) of the Broadband Data Improvement Act:

*The term “advanced telecommunications capability” is defined, without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology.*

This term “Broadband” is quite broad, including many deliberately precise types of FCC categories, including Broadband Radio Services (BRS) and Advanced Wireless Services (AWS). PEC draws the inference that any telecommunications mode that is extremely fast and thus high in bandwidth is going to be allowed in the right-of-way.

In referring to the Telecommunications Act of 1996, however, there is only one general type of service referred to and that is “personal wireless services.” The term is precise and defined as follows:<sup>1</sup>

*the term “personal wireless services” means commercial mobile services, unlicensed wireless services, and common carrier wireless exchange access services;*

Only some personal wireless services are “broadband” and most “advanced telecommunications capability” services are not personal wireless services.

The distinction is critical, since the Telecommunications Act of 1996 governs the way in which state and local governments regulate siting of what the FCC once called “towers.” In the Telecommunications Act, special limitations are prescribed for approving or denying “personal wireless service facilities.”

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<sup>1</sup> Section 332(c)(7)(A)(i).

## **b. Personal Wireless Service Facilities**

Similar to “advanced telecommunications capability,” this term is a mouthful and has all but disappeared from FCC documents. Yet, “personal wireless service facilities” is a statutorily defined term, as follows:<sup>2</sup>

*the term ‘personal wireless service facilities’ means facilities for the provision of personal wireless services;*

The FCC prefers to use the term “wireless facilities” throughout the Notice, but “wireless facilities” is a much broader term than “personal wireless service facilities.” Personal wireless service facilities have limitations (and protections) attached to them by the Telecommunications Act that “wireless facilities” do not have. The FCC cannot merely change terminology that is codified in the law.

The result of grouping personal wireless service facilities with “wireless facilities” leads the reader of the Notice to believe that the FCC can promulgate rules and regulations for all “wireless facilities” that will equally apply to personal wireless service facilities.

PEC does not accept this conflation. Mere “wireless facilities” can be installed within the right-of-way today, and most certainly after the FCC deliberates, by filling out a form from a local government, paying a fee to that local government and constructing within given specifications. Personal wireless service facilities, on the other hand, have always required that:<sup>3</sup>

*Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.*

Entry into the right-of-way is not made by decisions requiring substantial evidence and, in an attempt to allow personal wireless service facilities in the right-of-way without meeting the above requirement for denial, a decision-maker would be in direct violation of the Telecommunications Act of 1996. These comments expand on this concern in a later section of this report.

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<sup>2</sup> Section 332(c)(7)(A)(ii).

<sup>3</sup> Section 332(c)(7)(A)(iii).

### **c. Aesthetics**

The FCC uses this term in the Notice of Inquiry Regarding Access to Public and Private Rights-of-Way<sup>4</sup> and elsewhere. When related to personal wireless service facilities, the term “aesthetics” is pejorative and can actually work against a local government’s best intentions. In some states, such as the Commonwealth of Virginia, courts do not recognize denial of personal wireless service facilities on the basis of “aesthetic” concerns alone. Using the word “aesthetics” actually steers the local government down the wrong track, since aesthetics may not be a defensible concern.

Webster’s defines “aesthetic” as “of beauty” or “sensitive to art and beauty.”<sup>5</sup> No one ever expects a personal wireless service facility to be a thing “of beauty” or “sensitive to art and beauty.” To use the word “aesthetics” sets up false expectations and the FCC would be wise and respectful of local governments not to use the term.

PEC and other knowledgeable entities use “visual impacts” to measure a personal wireless service facility’s appearance. More important, PEC stresses the term “scenic” as a value, rather than aesthetics. The term “scenic” derives from the National Scenic Byways Program, the Scenic Byways of Virginia and the many scenic drives and scenic highways in every state. Most of these byways, drives and highways are within rights-of-way. The importance of the term “scenic” is that it carries with it context, including:

- History
- Environmental quality
- Economic importance

PEC stresses the term “scenic” because it is used everywhere and it is a value almost always enjoyed from within a right-of-way.

With regard to its visual impacts or its scenic enhancement, how could a right-of-way decision-maker ever evaluate a proposed personal wireless service facility from required application forms, or specifications, or even photos and drawings? Visual impacts and scenic qualities are perfect examples of measurements requiring substantial evidence.

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<sup>4</sup> WC Docket No 11-59, p. 9.

<sup>5</sup> Webster’s New World Dictionary, p. 21.



#### **d. Wireless Facilities**

By introducing the non-descript term “wireless facilities” into a national conversation, the FCC does itself and its commenters an injustice. By transitioning from its preferred term, “towers,” the FCC is now better positioned to place “wireless facilities” rather than “towers” in the right-of-way. Yet, the FCC has consistently used the word “towers” from its early Fact Sheets in 1996 to each of the FCC Commissioners’ statements on the importance of the implementing the National Broadband Plan.<sup>6</sup>

The FCC tells Americans that there are approximately 300,000 wireless sites in the U.S. This is the same number used by CTIA, the Wireless Association. PEC believes that this is substantially less than the actual number of personal wireless service facilities in the U.S. today. Some possible reasons for this undercounting are:

- CTIA counts “towers,” not personal wireless service facilities.
- There are an average of 2.5 personal wireless service facilities on a “tower.” This number does not include Broadband Radio Services, Wireless Communications Services, Mobile Satellite Services and a variety of other non-personal wireless service facilities found on “towers.”
- Towers do not include “roof-mounts,” many of which are personal wireless service facilities.
- Towers are rarely “nodes” in a Distributed Antenna System (DAS) configuration, although these comments contain a description of an attempt to install towers in a right-of-way configuration disguised as a DAS.
- Unpermitted personal wireless service facilities exist in all states both as collocations and concealed roof-mounts.

While the use of the term “towers” may suit the purposes of CTIA, it does not suit the purposes of the FCC in an attempt to locate “wireless facilities” in the right-of-way. That’s because most readers will believe that “towers” are too big for the right-of-way. And so we, as readers of the Notice, are skeptical of this new term coming from nowhere. More important, “wireless facilities” is not a term conducive to a national conversation that respects the protected and limited status of personal wireless service facilities. It’s not conducive to conversation because the term doesn’t have a meaning.

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<sup>6</sup> March 17, 2010.

PEC asks the FCC, “Just what is a “wireless facility”? Is it a dish, a whip, cables, a box, a mast, an array, a free-standing post, or all of these things? If the FCC plans to let “wireless facilities” into the right-of-way, the FCC should at least tell the public what they are. One thing is certain: “wireless facilities” are not the same as “personal wireless service facilities.”

### **3. A General History of Wireless in the Right-of-Way**

This section is provided to ask the question, “Why do we need to ease the hurdles to enter the right-of-way when so many ‘wireless facilities’ are already in the right-of-way”? PEC prefers the word “hurdle” to “barrier,” because barrier means stonewall. Hurdle means “get over” or “workaround.” This section provides photographs to make a point. The “barriers” have been broken long ago, or else how did so many “wireless facilities” get in the right-of-way before?

While the terms “broadband” and “wireless facilities” are recent inventions of the FCC, the placement of wireless in the right-of-way has been going on for years. As shown in Figure 2, public safety, traffic control and utility management have been using public and private rights-of-way for their own purposes, sometimes with local approval, usually without any outside agency oversight. The question is: are these “wireless facilities” subject to issues raised in the Notice, or are previous users of the right-of-way exempt from future FCC rules and regulations now being contemplated?

One response to the question of previous users is, “Well, they don’t have advanced telecommunications capability and, therefore, they aren’t broadband.” PEC reminds the FCC that wireless systems that initially were installed as analog or digital networks with limited capacity facilities are now being upgraded to accommodate broadband capability. For the four (soon to be three) national carriers, the following upgrades are occurring at most sites all over the U.S.:

- AT&T Mobility and Verizon are adding 700 MHz services, thereby advancing to LTE.
- Sprint is either collocating or connecting to nearby Clearwire, thereby adding WiMAX capability.
- T-Mobile is adding AWS, thereby allowing them to advance (according to T-Mobile) to 4G.

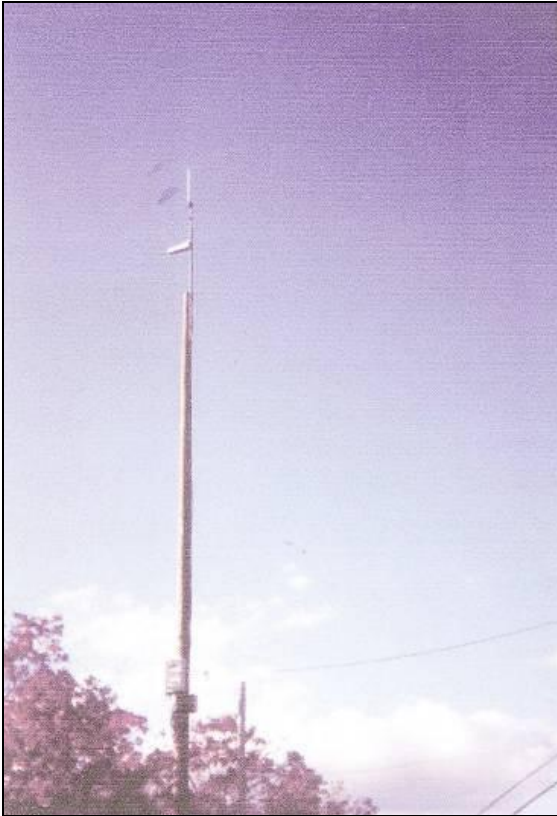


Figure 2: Public and quasi-public utilities have been placing wireless in the right-of-way for years. What is it they know that the FCC could learn from? Or are they exempt from any new FCC rules or regulations because they are already in the right-of-way? The FCC should take note that because an agency has a franchise to deliver electricity, water or any other essential service, it does not mean that same agency has a franchise to deploy wireless.



So, for personal wireless service facilities, if they weren't broadband when installed, do they become broadband when they upgrade? Figures 3 and 4 show a right-of-way mount upgrading from 2G (digital) to 3G.



Figure 3: This 2G (digital) mount has been in the right-of-way for more than 10 years.



Figure 4: The same right-of-way pole in Figure 3, only upgraded to 3G. The boxes get bigger, the cables multiply and the stress on the pole increases. When this carrier upgrades to LTE, the pole will need to be changed to steel. Who from the local government approves that and who monitors the increased RF emissions?

Some utilities use Specialized Mobile Radio, a personal wireless service, without seeking approvals from the local government for their personal wireless service facilities in the utility's own right-of-way. Why should they? They are already franchised to be in the right-of-way, and the personal wireless service facility is only to facilitate the utility's own business. Would a utility's own equipment, such as that shown in Figure 5, be considered "wireless facilities"? If, as a previous user, the utility was only using a narrow band for data but wanted to upgrade to broadband, would the new rules and regulations apply?

The same questions apply to public safety wireless networks. When they were initially installed, tiny whips on traffic lights or light poles may only have been used to control traffic or call police cruisers. Today, cities and counties are looking to next generation networks that will have advanced telecommunications capability. Existing facilities will need to be upgraded. Will the new rules and regulations apply to them?

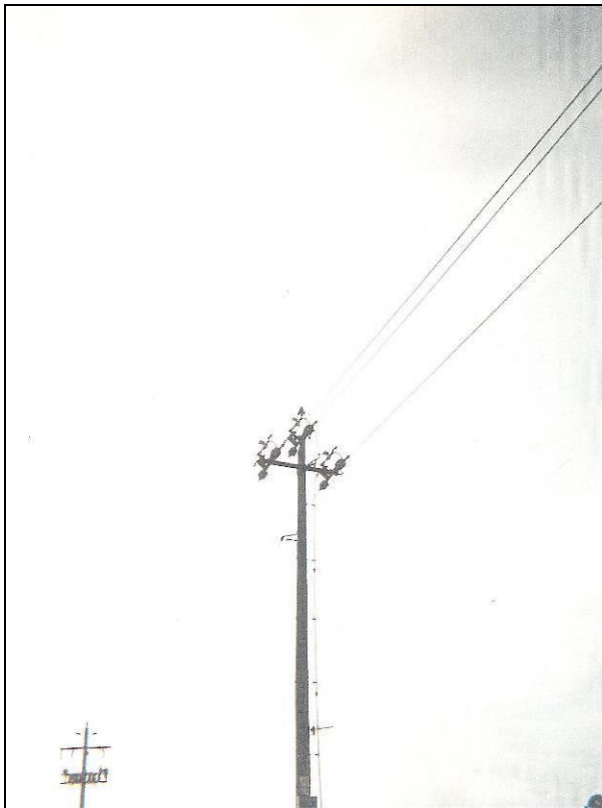


Figure 5: Pacific Gas & Electric's simple wireless network has been installed in the right-of-way for years. The three mini-antennas hardly distinguish the top of the wireless pole from the normal pole in the background. Note the backhaul cable pushed off from the pole and the yagi antenna projected mid-pole. Will this system upgrade to Broadband? Perhaps that is why PG&E is petitioning the CPUC for weaker pole standards.

Wireless in the right-of-way has existed for years. One could ask, "What's the entry problem; they're in the right-of-way, aren't they"? If the answer is, "Broadband requires many more sites, and the rights-of-way will be the best location." The following questions are raised:

- How many sites will there be per mile of right-of-way?

- How many facilities can there be on a single pole?
- Will pre-existing users be subject to the new rules and regulations when they upgrade to broadband?
- Are public (police/fire) and semi-public (utilities) using “wireless facilities” or will they be exempt from the new rules and regulations?

Existing wireless in the right-of-way raises questions and doubts about opening up all rights-of-way to more broadband users as well as the upgrade plans of existing right-of-way users.

#### **4. Case Study: Norfolk Southern Right-of-Way in the PEC Region**

This section is provided to document PEC’s own experience with an attempt to deploy in a private right-of-way. There was no zoning that could be applied (Fauquier County’s zoning does not apply in the right-of-way). PEC took an active position in forcing this project to be more thoroughly scrutinized. But, if there wasn’t a PEC, there would be no substantial evidence, there would be no public discussion and there wouldn’t even be a bureaucrat to perform a ministerial function of approval. It was a stealth project.

In 2010 a company named City Switch proposed to build seven, 80-foot cell towers along the Norfolk Southern railroad right-of-way crossing from western Prince William County through Thoroughfare Gap, and into The Plains. The proposed project became known as The Plains DAS project. Much of this area is under conservation easement or located in a historic district.

##### **a. City Switch L.L.C.**

City Switch is an affiliate of Norfolk Southern Corp. According to the former (now revised) Norfolk Southern website:

*City Switch L.L.C. was created by Norfolk Southern Railroad and a group of seasoned telecommunications professionals to develop and manage railroad communication infrastructure. City Switch focuses on three strategic areas: new tower development, collocation opportunities on existing towers and fiber and microwave backhaul opportunities. City Switch develops towers throughout the Norfolk Southern Railroad system and for other Railroad partners.*

On a blog posted by RCR Wireless News on 11/6/06, City Switch is said to have stated the following about its right-of-way property:



*(because its right-of-way)... is controlled by the federal government (City Switch) can build pretty much as it sees fit, provided that the towers be used to some extent for railroad purposes.*

Presumably, this meant (as City Switch claimed) that it did not need to comply with local zoning regulations. Norfolk Southern has since sold off 60% of its share in City Switch. However, City Switch has had at least one problem with their claim that they did not need to comply with local zoning requirements.

In 2008, City Switch began construction of a tower on a Norfolk Southern Railroad yard after their application for a building permit was denied by Schuylkill Township, Pennsylvania. The application was denied due to non-compliance with township ordinances. City Switch claimed their tower fell under ICCTA<sup>7</sup> jurisdiction and, as such, no local building permit was needed. Construction was started and the tower was erected. The township issued a stop work order and a lawsuit was filed by the township against City Switch in Chester County Court; the case was moved to Federal Court by City Switch but the Federal District Court remanded the case back to the County Court. A settlement between the Township and City Switch was reached that provided the following:<sup>8</sup>

*For technical reasons, the recently constructed tower located in Schuylkill Township has been deemed incompatible with railroad usage, and will be removed from its base, including the base bolts within ninety (90) days from the date of Schuylkill Township's acceptance of the settlement terms set forth ... County Court Judge Jacqueline C. Cody will retain jurisdiction over the case until the terms in the settlement agreement are met.*

A Section 106 Review, pursuant to FCC NEPA regulations and the national Historic Preservation act, 26 CFR Part 800, was prepared for The Plains DAS site in the PEC area by a company called ECA. ECA was retained by a company called Salient Associates.

**b. Salient Associates**

The Section 106 Review states:

*Environmental Corporation of America (ECA) client, Salient Associates, is proposing to construct seven wooden poles (each 80 feet overall height) at*

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<sup>7</sup> Interstate Commerce Commission Termination Act.

<sup>8</sup> Schuylkill Township, Board of Supervisors, Minutes of meeting of July 7, 2010.

*the subject sites as described in the following FCC Form 620, New Tower (NT) Submission Packet.*

Salient Associates states on its website that they “have managed the design and construction of over 1500 wireless sites.”

The ECA Section 106 Review does not provide an adequate project description. Page one of the letter from ECA to the Virginia Department of Historic Resources dated 12/3/10, describes the proposed project as the construction of:

*... seven wooden poles (each 80 feet overall height) at the subject sites as described in the following FCC Form 620 New Tower (NT) Submission Packet.*

**c. Railroad Wireless L.L.C.**

Railroad Wireless L.L.C. is listed as the applicant on the FCC Form 620. This company currently does not have a web site and Kreines & Kreines, Inc. could find no information about this site on the internet. Presumably, the ministerial review and approval of the project was to be granted by the one employee at Railroad Wireless L.L.C.

The Federal Tower Notification Information system e-mail notifying tribal groups of the proposed project describes the proposed project as:

*Structure Type: POLE – Any type of Pole*

*Support Structure: 24.4 meters above ground level*

*Overall Structure: 24.4 meters above ground level*

*Overall Height AMSL: 146.9 meters above mean sea level*

ECA photographs in Attachment B, Site Information of the Section 106 Review call some of the photographs of project areas “Proposed Telecommunications Facility” and other photographs call a specific site a “Proposed Tower.” Attachment B also refers to “Site Vicinity Plans” that show the locations of “proposed tower sites.”

Kreines & Kreines, Inc. believes that all of these project descriptions are deficient. They do not provide readers with any information on what would be located on these seven monopoles. Monopoles are usually constructed as mounts for antennas, dishes, and platforms. There is no information provided about how many antennas would be attached to each pole. There is no information as to whether each pole would hold equipment for only one carrier or for more than one carrier. Would the poles also have public safety antennas? The antennas,



dishes and platforms are normally connected to a pole by mounting racks and all of the equipment is accessed by cables. All of these items have visual impacts that can be significant and adverse. It is impossible to identify the impacts of the proposed project without a more complete description of the project.

Materials prepared by ECA state that the poles would be made of wood, yet the Federal Tower Notification Information system e-mail states that the pole could be of any type, which could include steel.

The seven poles are described by ECA in its letter to Virginia Department of Historic Resources dated 12/3/10 as being “nodes.” However, there is no description of what the “nodes” are. One of the nodes (node 2) shown in Figure 6 is described by ECA as consisting of:

*... the construction of a 50-foot by 30-foot telecommunications compound.*

The remaining six poles would be located in nodes within 7-foot by 7-foot lease areas. A single “node” is shown in Figure 7. It sure looks like a tower being prepared for collocation to Kreines & Kreines, Inc.

In viewing materials submitted by ECA, Kreines & Kreines, Inc. became concerned that this was not so much of a Distributed Antenna Systems (DAS) project as it was a project for seven poles intended for future collocation.

From a radio frequency (RF) propagation plot submitted to Fauquier County (within the PEC area), as shown in Figure 8, it became apparent that “City Switch” was the right-of-way owner and that the actual carrier was to be AT&T Mobility. The propagation plot shows extensive coverage, particularly at the eastern and western ends of the project. Kreines & Kreines, Inc. believes that this proposed coverage from 80-foot above ground level (AGL) towers is excessive for a DAS.

One of the proposed wooden poles is shown in Figure 7. The height of the pole, accentuated by externally mounted three-sector beamed antennas, is not typical of DAS “nodes.” Yet, the entire node is proposed on a seven-foot by seven-foot site inside the Norfolk Southern right-of-way. This pole could be changed out to a steel structure so that other carriers would be mounted after the DAS was approved and constructed. Kreines & Kreines, Inc. believes that this project could be a “Trojan Horse,” or a right-of-way project intended ultimately for multi-tenant collocation in an area of prime historic, cultural and scenic significance.

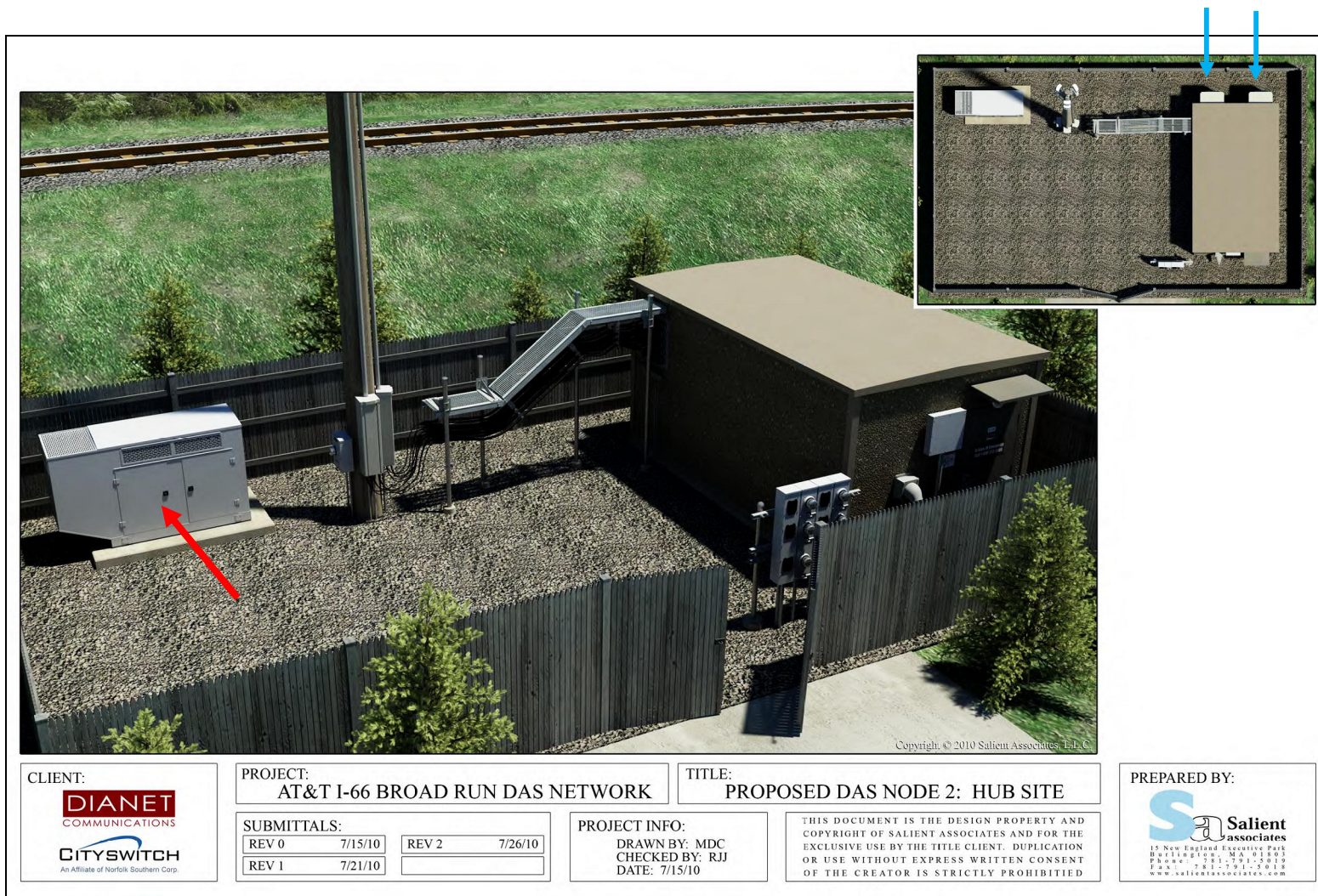


Figure 6: The large box at the red arrow is a generator. The two small boxes at the blue arrows are air conditioners.  
Source of drawing: Section 106 Review Prepared by Environmental Corporation of America (ECA) for Salient Associates, 12/3/10.  
(Red and blue arrows added by Kreines & Kreines, Inc.)





Figure 7: Proposed wooden pole for the City Switch+project.

Source of drawing: Section 106 Review Prepared by Environmental Corporation of America (ECA) for Salient Associates, 12/3/10.

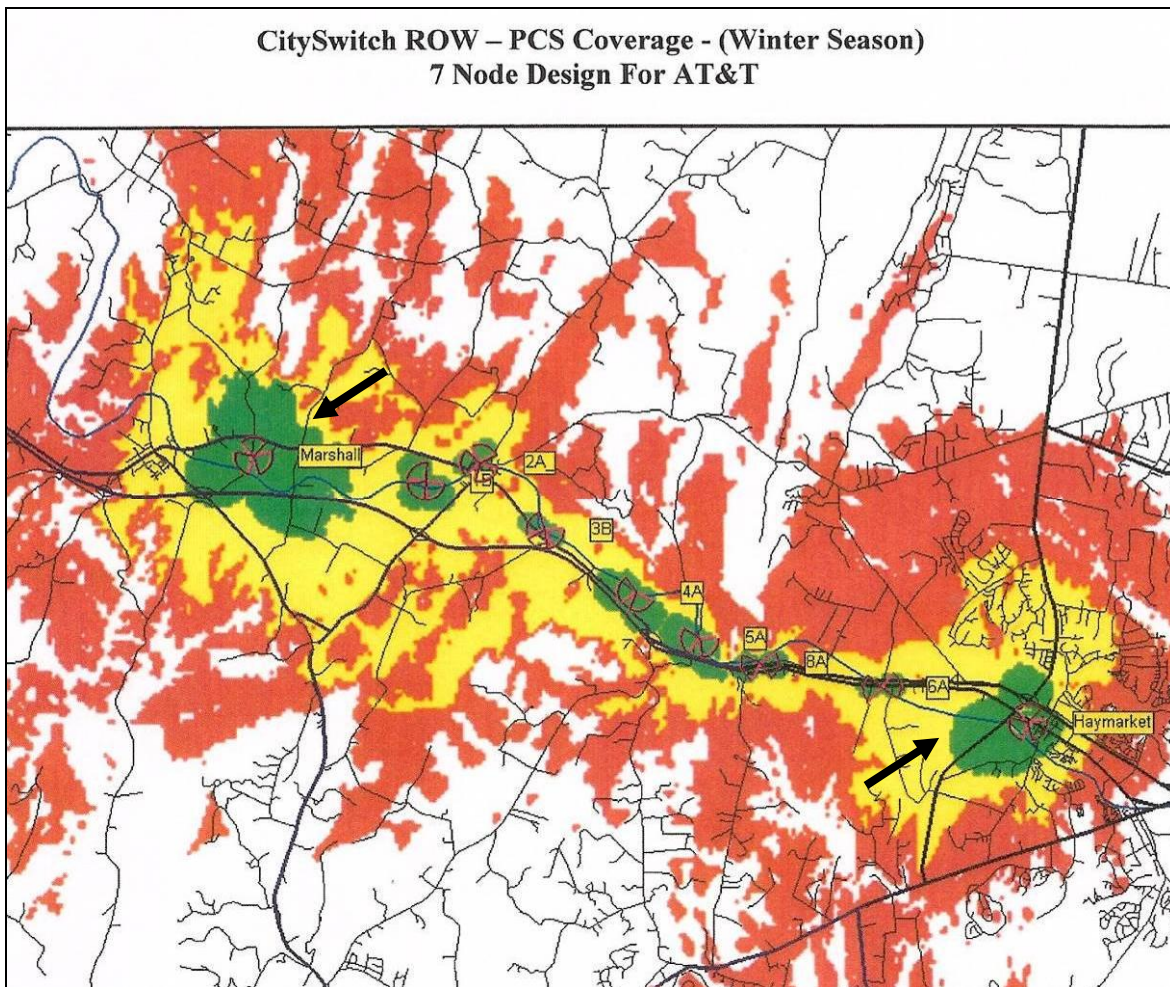


Figure 8: Radio frequency propagation plot submitted to Fauquier County. The two coverage plots at arrows are unusually large for a DAS node.

Source of drawing: V-Comm L.L.C. (Black arrows added by Kreines & Kreines, Inc.)

**d. National Environmental Policy Act (NEPA) Regulations as Administered by the FCC**

FCC passes this obligation along to wireless carriers or vendors who are required to review any proposed facilities that may be considered:

*(1) Facilities that are to be located in an officially designated wilderness area.*

*(2) Facilities that are to be located in an officially designated wildlife preserve.*

*(3) Facilities that: (i) May affect listed threatened or endangered species or designated critical habitats; or (ii) are likely to jeopardize the continued existence of any proposed endangered or threatened species or likely to result in the destruction or adverse modification of proposed critical habitats, as determined by the Secretary of the Interior pursuant to the Endangered Species Act of 1973.*

*(4) Facilities that may affect districts, sites, buildings, structures or objects, significant in American history, architecture, archeology, engineering or culture, that are listed, or are eligible for listing, in the National Register of Historic Places.*

*(5) Facilities that may affect Indian religious sites.*

*(6) Facilities to be located in a flood Plain (See Executive Order 11988.)*

*(7) Facilities whose construction will involve significant change in surface features (e.g., wetland fill, deforestation or water diversion). (In the case of wetlands on Federal property, see Executive Order 11990.)*

*(8) Antenna towers and/or supporting structures that are to be equipped with high intensity white lights which are to be located in residential neighborhoods, as defined by the applicable zoning law.*

*(b) In addition to the actions listed in paragraph (a) of this section, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA) if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency radiation in excess of the limits in §§ 1.1310 and 2.1093 of this chapter.*



The Section 106 Review attempts to respond to numbers 4 and 5 above. Kreines & Kreines, Inc. believes that the Section 106 review did not respond completely and accurately to number 4 above.

In addition, Kreines & Kreines, Inc. does not know if other NEPA requirements have been addressed in The Plains DAS project. Specifically, the proposed project will be both a:

- Facility that may be located in a flood plain.
- Facility whose construction may involve significant change in surface features (e.g., wetland fill).

To develop the above information, Kreines & Kreines, Inc. visited the website of the National Wetlands Inventory. The Node 1 site is within Freshwater Emergent Wetlands. Node 4 is within Freshwater Forested/Shrub Wetlands. In the case of Node 4, a long new service road must be constructed within the Freshwater/Shrub Wetlands.

In the matter of flood plains, Kreines & Kreines, Inc. visited the Fauquier County GIS website showing data layers. In general, the entire Broad Creek corridor is shown as flooding. The railroad right-of-way, as in most mountainous areas, follows the creek bed. In particular, both the Node 1 site and the Node 4 site are shown as under water during flooding.

Kreines & Kreines, Inc. assumes that these websites are credible sources of information for the purposes of showing environmental impacts. Therefore, the FCC will require the project applicant to prepare an Environmental Assessment per 47 CFR Section 1.1307.

Without substantial evidence and deliberation in a public review process, there would be no chance that this project would be denied.

## **5. Discretionary Versus Ministerial Decisions**

This section presents the crux of PEC's comments. PEC believes that simply allowing personal wireless service facilities (or any combination of a personal wireless service facility and a "wireless facility") into the right-of-way is a ministerial act. Yet, the Telecommunications Act mandates that denials of a personal wireless service facility be a discretionary action, based on substantial evidence in a written record. Changing the mandate of a discretionary act to a ministerial act is the job of the U.S. Congress, not the FCC.

The Telecommunications Act of 1996 preserves local zoning authority over decisions regarding personal wireless service facilities. Zoning differs from state to state, particularly in the way decisions are made:

- Some states, such as Virginia, are “legislative” states, where the process of decision-making is by a simple vote.
- Many states, by contrast, have some sort of quasi-judicial process where decisions affecting a single property or use are made dependent upon substantial evidence.

States with a quasi-judicial process over some zoning decisions have detailed enabling legislation for boards or review authorities that are called “adjudicatory.” An adjudicatory decision process requires discretion, so that zoning actions resulting from an adjudicatory process need:

- Substantial evidence, which means “more than a scintilla and less than preponderance” of facts supporting a decision.
- A hearing body or certified individual (e.g., a zoning administrator) that hears evidence, deliberates as to what is substantial and makes a decision, usually in public.
- A procedure, quasi-judicial in nature, which rationally links the substantial evidence to a decision.

In the framing of the Telecommunications Act of 1996, the wireless industry (basically cellular and PCS carriers), did not want zoning authorities (boards, commissions, administrators, etc.) to deny their proposals legislatively, that is, by a simple vote.

At the insistence of the wireless industry, Section 332(c)(7)(B)(III) reads:

*Any decision by a State or local government or instrumentality thereof to deny a request to place, construct, or modify personal wireless service facilities shall be in writing and supported by substantial evidence contained in a written record.*

This language clearly requires an adjudicatory process to deny a personal wireless service facility. Since not all broadband media are personal wireless services, not all applications would be subject to this statute. Likewise, since not all “wireless facilities” are “personal wireless service facilities,” only the latter require a quasi-judicial action for denial under the Telecommunications Act.

Many would argue that simple legislative actions involve voluminous data, analysis and “proof” on the part of the applicant. The reason that these abundant submittals are not “substantial evidence” is that they need not be linked to a legislative decision. The Telecommunications Act of 1996 mandated an adjudicatory proceeding for the denial of a personal wireless service facility. As the 1996 Conference Committee stated:<sup>9</sup>

*The phrase ‘substantial evidence contained in a written record’ is the traditional standard used for judicial review of agency actions.*

PEC believes these were not instructions to a court, but aimed at the reviewer(s) making a decision. Therefore, the local denial of a personal wireless service facility had to be the result of a discretionary review during a quasi-judicial process based on substantial evidence leading to a written decision.

**a. Granting Permission to Enter the Right-of-Way is a Ministerial Decision**

The right-of-way is a busy place. It gets cut up and re-patched so many times that its pavement life is shortened. Decisions need to be made daily on who enters the right-of-way, what submittals they need to show and whether their final work meets code. These decisions are made by a trained employee, i.e., a “minister.” How much right-of-way work would get done if a board or commission heard each right-of-way application? Nothing would move forward if entry into that right-of-way was a discretionary decision.

The line between a discretionary action and a ministerial action is not bright. A public official acting in a ministerial capacity sometimes applies a modicum of discretion in interpreting a drawing, for example., In Virginia, a legislative state, PEC looks to other states for guidance on what is discretionary and what is ministerial. In California, for example:<sup>10</sup>

*'Ministerial' describes a governmental decision involving little or no personal judgment by the public official as to the wisdom or manner of carrying out the project. The public official merely applies the law to the facts as presented but uses no special discretion or judgment in reaching a decision. A ministerial decision involves only the use of fixed standards or objective measurements, and the public*

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<sup>9</sup> Telecommunications Act of 1996, Joint Explanatory Statement of the Committee of Conference, H. Rep. No. 104-458, 94<sup>th</sup> Cong. 2d Sess., January 31, 1996.

<sup>10</sup> Adams Point Preservation Society, Plaintiff and Appellant, v. City of Oakland, Defendant and Respondent, Idamae Wood, Shen Wang et al., Real Parties in Interest. 192 Cal.App.3d 203 (May 29, 1987).



*official cannot use personal, subjective judgment in deciding whether or how the project should be carried out.*

In New York, similarly:<sup>11</sup>

*(A "ministerial" act is one that involves direct adherence to a rule or standard with a compulsory result.) Issuance of building permits, where the issuance of the permit is determined solely on basis of the applicant's compliance with the building code, would be included in this category.*

And in Georgia, a legislative state:<sup>12</sup>

*A discretionary act ... calls for the exercise of personal deliberation and judgment, which in turn entails examining the facts, reaching reasoned conclusions, and acting on them in a way not specifically directed.*

PEC believes that entering the right-of-way involves a ministerial decision from an official, such as a public works director. An applicant either is qualified to use the right-of-way (e.g., a franchisee), fills out an application and provides the required submittals or the application is denied. No substantial evidence is needed. The application to enter the right-of-way with proposed construction either meets the specifications or not. There need be:

- No public hearing.
- No appeals.
- No modification of the application by the decision-maker.

PEC believes that allowing a personal wireless service facility to enter the right-of-way without the possibility of denial resulting from a quasi-judicial process is contrary to the Telecommunications Act of 1996. A better way to change the Telecommunications Act would be for the FCC to lobby the U.S. Congress for telecommunications reform.

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<sup>11</sup> New York State, Department of Environmental Conservation, The SEQR Handbook, 3<sup>rd</sup> Edition, 2010.

<sup>12</sup> Seay v. Cleveland, 270 Ga. 64 (508 SE 2<sup>nd</sup> 159) (1988).

**b. Why Can't the FCC Change a Discretionary Requirement to a Ministerial Requirement?**

The wrangling by local governments and the wireless industry over Section 704 [which amended Section 332(c)(7)] was intense. Some felt that the FCC, which is a model quasi-judicial body, should be able to overrule local land use decisions. Again, PEC looks to the Conference Committee:<sup>13</sup>

*Conference agreement*

*The conference agreement creates a new section 704 which prevents Commission preemption of local and State land use decisions and preserves the authority of State and local governments over zoning and land use matters except in the limited circumstances set forth in the conference agreement.*

*Any pending Commission rulemaking concerning the preemption of local zoning authority over the placement, construction or modification of CMS facilities should be terminated. [Editor's Note: PEC believes this includes easing the entry of personal wireless service facilities into the right-of-way.]*

*The limitations on the role and powers on the Commission under this subparagraph relate to local land use regulations and are not intended to limit or affect the Commission's general authority over radio telecommunications, including the authority to regulate the construction, modification and operation of radio facilities.*

"Commission" in the above paragraphs refers to the FCC. "CMS" are Commercial Mobile Services, also known as Commercial Mobile Radio Services, and are a subset of personal wireless services. Some would argue that all of the new services created by the FCC, such as Broadband Radio Services, are also CMRS. However, PEC notes that CMRS (or CMS) is also defined in the Telecommunications Act of 1996 and limited to:

- Cellular.
- PCS.
- Specialized Mobile Radio.
- Enhanced Specialized Mobile Radio.
- Paging.

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<sup>13</sup> Telecommunications Act of 1996, Joint Explanatory Statement of the Committee of Conference, H. Rep. No. 104-458, 94<sup>th</sup> Cong. 2d Sess., January 31, 1996.

A good way to change or expand this list would be amend the Telecommunications Act of 1996.

## **6. Health and Safety**

The purpose of this section is to demonstrate that easing the entry of “wireless facilities” into the right-of-way raises serious health and safety issues. PEC does not believe these issues can be avoided before a project is approved by establishing a fixed set of specifications or standards. Rather, the avoidance of health and safety impacts is best achieved by the introduction of substantial evidence prior to the project’s approval. Even if denial is precluded by FCC Guidelines, it is the public deliberation during a quasi-judicial process that is essential.

Most states confer zoning powers to their local governments for the purpose of protecting “public health and safety.” Sometimes other worthy purposes such as “general welfare” or “morals” are deemed to need protection, but health and safety are the primary reasons for land use control.

### **a. Health Impacts**

There is controversy over whether personal wireless service facilities impact human health or not, but there remains general confusion regarding the Telecommunications Act provision regarding “radio frequency emissions:”<sup>14</sup>

*No State or local government or instrumentality thereof may regulate the placement, construction, and modification of personal wireless service facilities on the basis of the environmental effects of radio frequency emissions to the extent that such facilities comply with the Commission’s regulations concerning such emissions.*

Some observers believe this provision pre-empts local zoning authorities from even discussing RF emissions. Other local governments feel compelled to ask for substantial evidence, even though they can’t deny an application unless the FCC Guidelines for RF emissions are exceeded. PEC notes that it is impossible to know whether FCC Guidelines are exceeded without substantial evidence provided in each application.

To its credit, the FCC published *A Local Government Official’s Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance* in conjunction with its Local and State Government Advisory Committee, which no longer exists.

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<sup>14</sup> Section 332(c)(7)(A)(iv).

In this generally helpful primer, scenarios such as a person standing a distance away from a roof-mounted antenna array or a monopole are diagrammed. This Official's Guide was published in 2000, and following were not even thought of:

- 4G (we were still struggling with 3G).
- Broadband (there was Broadband PCS, but it lacked sufficient bandwidth to have Advanced Telecommunications Capability).
- Personal wireless service facilities in the right-of-way (there were some, but "towers" were the deployment of choice in those early days).

Consequently, in looking to the FCC for guidance, PEC finds that conditions have changed.

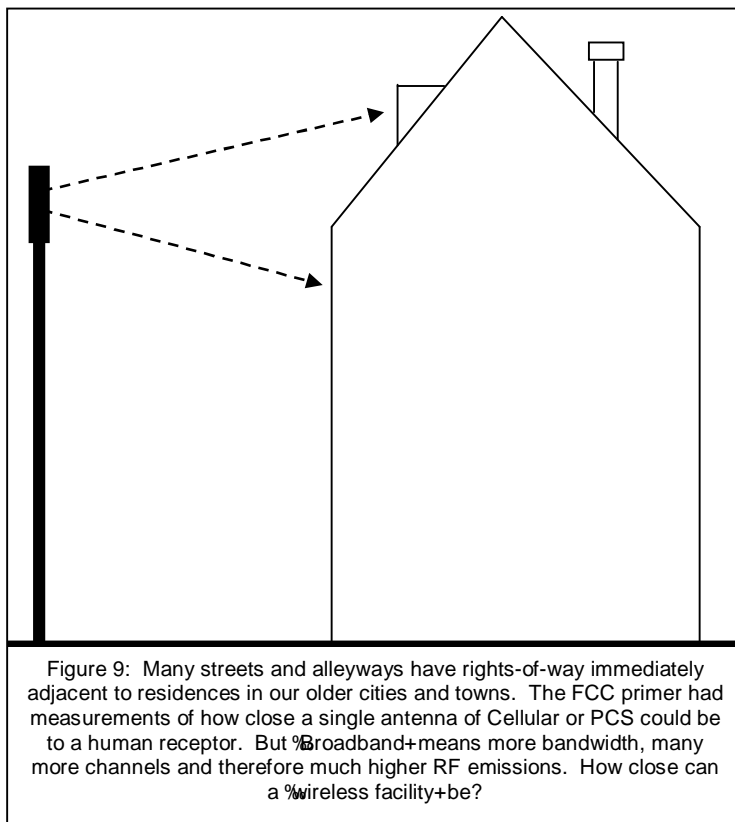


Figure 9 illustrates how rights-of-way in older cities and towns will be quite close to right-of-way deployments. It is impossible to predict the power densities of these Broadband facilities, but PEC assumes:

- Some will be personal wireless service facilities, some will not. Many will be hybrids.
- Some will use beam antennas, some will use omni-directional antennas and still others may have "patch" antennas.
- Much more bandwidth will be needed for Broadband.
- More bandwidth means more channels from each "wireless facility."

Consequently, the tables and figures in the FCC's *A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance* take on new meaning when the following are considered:

- Table B1-1 is entitled "Estimated 'worst case' horizontal\* distances that should be maintained from a single, omni-directional, cellular base station antenna to meet FCC RF exposure guidelines." (\*These distances are based on exposure at same level as the antenna, for example, on a rooftop or in a building directly across from and at the same height as the antenna.)
- The furthest minimum recommended distance in this table is 48.2 feet.

The above is from a single whip antenna. Today, wireless carriers are deploying dual-band and multi-band antennas. True, these are sectorized antennas rather than omni-directional antennas, but PEC asks the reader to consider four multi-band antennas in an array (as shown in Figure 10). Would not the minimum distances needed from a residential window far exceed any shown in *A Local Government Official's Guide to Transmitting Antenna RF Emission Safety: Rules, Procedures, and Practical Guidance*?



Figure 10: A 20<sup>th</sup> Century personal wireless service facility antenna array after four upgrades. What will it look like after LTE is added? Could this be added into the right-of-way?

Who knows what the Broadband emissions of the future will be? Will a public works department be able to make a ministerial decision as to what is healthy and what is not? A local government cannot deny a personal wireless service facility unless its emissions exceed FCC Guidelines. But substantial evidence of RF emissions will never be submitted to a right-of-way decision-maker, much less required, for each ministerial decision over an application for a "wireless facility" in the right-of-way. To make a decision, the local government will need

substantial evidence, and peer (or third party) review of the application's substantial evidence may be necessary.

Further, PEC believes that after careful reading, Section 704 intends that the FCC Guideline limits are only extended to personal wireless service facilities. Some Broadband "wireless facilities" will not be personal wireless service facilities, and they may be denied in a discretionary review for any level of RF emissions. This suggests that further work is needed by the FCC as to just how local governments can deal with the greatly increased level of RF emissions in rights-of-way next to residences.

PEC has come to the conclusion that the introduction of "wireless facilities" into rights-of-way without presenting substantial evidence showing that the FCC Guidelines are not exceeded will be unmanageable by local governments. Whether local governments can deny or not depends, in part, on knowing:

- Is the "wireless facility" a personal wireless service facility or a non-personal wireless service facility?
- Substantial evidence showing RF emissions from the initial installation.
- Substantial evidence showing RF emissions as upgrades occur.
- Periodic monitoring to show that the substantial evidence was correct.

These are issues for discretionary decisions, not ministerial actions.

#### **b. Safety**

On October 21, 2007, there was a wildfire in Malibu Canyon in Southern California that destroyed 14 structures and 36 vehicles. There is little disagreement that:<sup>15</sup>

- The fires were started from three utility poles that fell and "arc-ed," causing sparks leading to the fire.
- The three utility poles were blown over by high winds, although with their normal power line loads, they would have withstood those winds.
- Several years after the 1950s, when the poles were installed, the poles were used by three personal wireless service carriers and a DAS vendor as mounts for telecommunications equipment. Most attachments and upgrades occurred incrementally at separate times.

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<sup>15</sup> Latimes.com, 5/7/09.

Numerous proceedings before the California Public Utilities Commission (CPUC), a state version of the FCC, have been held to determine “which straw broke the camel’s back”? The poles had been subject to ministerial regulation at three levels:

- Southern California Edison (SCE) had to meet CPUC regulations regarding the wind loading at the utility poles.
- Each telecommunications company had to appear before a committee of pole-owners to state where it wants to mount which equipment. The proceeding is closed to the public and the decision is based on technical standards. This occurred for the initial attachments only.
- All parties, SCE and the telecommunications companies, are responsible for measuring wind loads and increased stress from subsequent attachments. Whether this was done or not is under review by the CPUC.

In this case, prior rules and regulations were relied upon by persons making ministerial decisions. Data were submitted, analyses were prepared and subsequent “upgrades” were probably not monitored.

CPUC is no longer deliberating over culpability. Four years after the fire, investigations and proceedings are ongoing as to insurance claims. The CPUC has General Order 95, which is a strict structural standard, but there was no consideration of further loadings of telecommunications equipment. In attempting to gather substantial evidence, after the fact, CPUC’s Consumer Protection and Safety Division testified:<sup>16</sup>

*These facts – coupled with the spoliation of evidence and the Respondents’ frequently changing versions in discovery responses of what evidence was maintained, cannibalized or discarded – demonstrate that SCE and other Respondents have made a mockery of the Commission’s accident reporting requirements and attempted to cover up the truth regarding the cause of the Malibu Fire, including whether the Malibu Poles were overloaded.*

As the practice of overloading utility poles continues, the investigations after the fact are unlikely to arrive at the facts necessary to consider before allowing such practices in Malibu Canyon. Had the parties been required to provide substantial evidence, in advance, in an adjudicatory proceeding, the process:

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<sup>16</sup> Supplementary Reply Brief of the Consumer Protection and Safety Division in Support of Motion to Compel Production of Wind Load Data and Supplemental Declaration of Edward Moldavsky (Exhibits EDM-15 – EDM-17), p. 2, 2/18/11.

- Would have taken longer before approval was granted, to be sure.
- But may not have resulted in four years of investigation and lawsuits with still no insurance claims settled.

Ironically, the telecommunications industry has, for insurance purposes, its own wind loading standards,<sup>17</sup> and those standards take into account:

- Future collocations.
- “Sail” resulting from flat antenna faces.
- Hanging cables swinging loose and slapping against the mount.

In a discretionary review, some party other than those involved (e.g., the County of Los Angeles), may have brought this substantial evidence into review before the fact.

PEC believes that safety issues are best discussed and thoroughly reviewed before approval rather than after the fact. PEC believes that discretionary review is necessary to elicit the substantial evidence necessary in order to attach more and more equipment to aging wooden poles. Much of PEC’s region is mountainous and wooded, so that any rights-of-way traversing this kind of landscape must be reviewed in advance, in a quasi-judicial process, before “wireless facilities” are attached to any structure: wooden, steel or otherwise.

## **7. President Obama’s Executive Order of January 18, 2011**

The purpose of this section is to remind the FCC that enabling the easy entry of personal wireless service facilities, and even non-personal wireless service facilities, will confuse the process of Broadband deployment, not streamline it. The FCC’s intentions are in conflict with existing law. They will create two classes of cell sites: personal wireless service facilities and non-personal wireless service facilities. And, there will be hazards occurring where none exist today.

President Obama, in the interest of improving regulation and regulatory review, declared:

*Section 1. General Principles of Regulation. (a) Our regulatory system must protect public health, welfare, safety, and our environment while promoting economic growth, innovation, competitiveness, and job creation. It must be based on the best available science. It must allow for public*

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<sup>17</sup> ASNI Standard EIA/TIA 222, the latest version of which is Revision G.



*participation and an open exchange of ideas. It must promote predictability and reduce uncertainty. It must identify and use the best, most innovative, and least burdensome tools for achieving regulatory ends. It must take into account benefits and costs, both quantitative and qualitative. It must ensure that regulations are accessible, consistent, written in plain language, and easy to understand. It must measure, and seek to improve, the actual results of regulatory requirements.*

In order to involve the public, the Executive Order goes on to state:

*Sec. 2. Public Participation. (a) Regulations shall be adopted through a process that involves public participation. To that end, regulations shall be based, to the extent feasible and consistent with law, on the open exchange of information and perspectives among State, local, and tribal officials, experts in relevant disciplines, affected stakeholders in the private sector, and the public as a whole.*

Most important, the Executive Order goes on to note:

*Sec. 3. Integration and Innovation. Some sectors and industries face a significant number of regulatory requirements, some of which may be redundant, inconsistent, or overlapping. Greater coordination across agencies could reduce these requirements, thus reducing costs and simplifying and harmonizing rules. In developing regulatory actions and identifying appropriate approaches, each agency shall attempt to promote such coordination, simplification, and harmonization. Each agency shall also seek to identify, as appropriate, means to achieve regulatory goals that are designed to promote innovation.*

The FCC is commended for opening this Notice up to all commenters, but PEC wonders why:

- There is a federal statute providing for local zoning authority, which includes the right to deny with substantial evidence, but the FCC desires to move some proceedings in the right-of-way out of local zoning authority and into a ministerial process devoid of public participation.
- There is an adjudicatory process mandated by federal statute, while the FCC proposes to remove some local applications out of this quasi-judicial process into a legislative process.
- There is terminology that is part of the federal statute and that is well defined, such as “personal wireless service facilities,” yet the FCC chooses to use a broader, undefined term such as “wireless facilities.”

- The FCC has a National Broadband Plan, an entire chapter of which is devoted to “Civic Engagement,” despite the prospect that the FCC proposes to move the review of Broadband facilities out of the local public hearing process and into the ministerial, closed-door, review process.
- The FCC has previously anticipated that the RF emissions of all kinds of wireless facilities should not be within close range of human receptors, but the placement of wireless facilities in older cities and towns rights-of-way will bring more powerful emissions even closer to residential properties than they are today.

These are the kind of examples of inconsistent and overlapping policies that President Obama referred to in his Executive Order.

## **8. Action Items**

PEC thanks the FCC for the opportunity to make comments on the FCC’s right-of-way plans. We ask that the FCC take the following first steps:

- Please acknowledge that the Telecommunications Act of 1996 refers to “personal wireless services” and “personal wireless service facilities.”
- Please define “wireless facilities” and, if they are identical to personal wireless service facilities, use the statutory language.
- Please explain how, if “wireless facilities” are different than “personal wireless service facilities,” local governments will be able to deal with two classes of Broadband in the new rules and regulations for right-of-way deployment.
- Please explain how existing wireless users in the right-of-way, whether public or private, will be required to comply with new right-of-way rules and regulations, particularly when modifying through “upgrades.”
- Please explain how proposals for wireless in the right-of-way will be subject to FCC’s NEPA regulations, particularly when:
  - Rights-of-way traverse historic, scenic and cultural areas of significance.
  - Rights-of-way flood from time to time.
  - New rights-of-way commonly fill or drain into wetlands.

- Please explain how proposed personal wireless service facilities in the right-of-way could be denied with substantial evidence in writing when the current process of admitting entrants into the right-of-way is ministerial rather than adjudicatory.
- Please explain how Broadband's RF emissions in the urban and suburban rights-of-way of this nation will be measured, reviewed and monitored for their distance to residential units in a ministerial process.
- Please explain how telecommunications equipment will be evaluated for wind load (and in some regions, snow load and ice load) when attached to wooden poles designed to hold distribution lines and cables.

Finally, please consider the findings of the U.S. Court of Appeals, Fourth Circuit, which includes our great Commonwealth of Virginia:<sup>18</sup>

*In all cases of this sort, those seeking to build will come armed with exhibits, experts, and evaluations. Appellees, in urging us to hold that such a predictable barrage mandates that local government approve applications, effectively demand that we interpret the Act so as always to thwart average, nonexpert citizens; that is, to thwart democracy ... Congress, in refusing to abolish local authority over zoning of personal wireless services, categorically rejected this scornful approach.* (emphasis added)

How will those non-expert citizens be able to make their substantial evidence known in a proceeding to allow a "wireless facility" in the right-of-way right next to their homes?

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<sup>18</sup> AT&T Wireless PCS, Inc. & PrimeCo Personal Communications, L.P., & Lynnhaven United Methodist Church v. City Council of the City of Virginia Beach, 155 F.3d 423 (4th Cir. 1998).